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EXAMINER

BACKER, FIRMIN

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/688,452

Applicant(s)

OGG ET AL.

Examiner

Firmin Backer

Art Unit

3621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 14<sup>th</sup>, 2004 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Whitehouse (U.S. Patent No. 6,005,945) in view of Leon (U.S. Patent No. 6,424,954).

4. As per claim 1, Whitehouse teaches a security system (*secure central computer, 102*) for securing data in a computer network (*network 100, fig 3, 4, 7*) comprising a plurality of user terminals (*customer, user, 102*) coupled (*connected*) to the computer network, a cryptographic device (*cryptographic key*) remote from the plurality of user terminals and coupled to the computer network, a plurality of security device transaction data for ensuring authenticity of the

Art Unit: 3621

one or more users, wherein each security device transaction data is related to a user and wherein the cryptographic device is not dedicated to specific user terminals (*see fig 3, 4 and 7, column 8 line 30-9 line 63*). Whitehouse fails to teach a cryptographic device includes a computer executable code for authenticating one or more users and verifying that the authenticated user is authorized to assume a role. However, Leon teaches a cryptographic device includes a computer executable code for authenticating one or more users and verifying that the authenticated user is authorized to assume a role (*see column 8 lines 45-67, 9 lines 20-27*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's cryptographic device includes a computer executable code for authenticating one or more users and verifying that the authenticated user is authorized to assume a role because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system and which level of security is applicable.

5. As per claim 2, Whitehouse teaches a system wherein the security device transaction data related to a user is loaded into the cryptographic device when the user requests to operate on a value bearing item (*see column 9 line 32-63*).

6. As per claim 3, Whitehouse teaches the claim inventive concept stated in claim 1. Whitehouse fails to teach a system wherein the assumed role includes one or more corresponding operations to be performed by the authenticated user. However, Leon teaches a system wherein the assumed role includes one or more corresponding operations to be performed by the authenticated user (*see column 8 lines 45-62, 9 lines 20-27, 35-67*). Therefore, it would have

Art Unit: 3621

been obvious to one of ordinary skill in that art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's system wherein the assumed role includes one or more corresponding operations to be performed by the authenticated user because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system and which level of security is applicable.

7. As per claim 4-10, Whitehouse teaches Whitehouse teaches the claim inventive concept stated in claim 1. Whitehouse fails to teach a system wherein the assumed role is a security officer role to initiate a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to withdraw from a user account, a user role to operate on a VBI, a certificate authority role to allow a public key certificate to be loaded and verified. However, Leon teaches a system wherein the assumed role is a security officer role to initiate a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to withdraw from a user account, a user role to operate on a VBI, a certificate authority role to allow a public key certificate to be loaded and verified (*see column 8 lines 45-9 line 67*). Therefore, it would have been obvious to one of ordinary skill in that art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's system wherein the assumed role is a security officer role to initiate a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to withdraw from a user account, a user role to operate on a VBI, a certificate authority role to allow a public key certificate to be

Art Unit: 3621

loaded and verified because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system and which level of security is applicable.

8. As per claims 11-14, 16, Whitehouse teaches the inventive concept as stated in claim 1. Whitehouse fails to teach a system wherein the cryptographic device includes a state machine for determining a state corresponding to availability of one or more commands in conjunction with the role, stateless, includes a computer executable code for preventing unauthorized modification of data, for ensuring the proper operation of cryptographic security and VBI related meter functions, for supporting multiple concurrent users and maintaining a separation of roles and operations performed by each user. However, Leon teaches a system wherein the cryptographic device includes a state machine for determining a state corresponding to availability of one or more commands in conjunction with the role, stateless, includes a computer executable code for preventing unauthorized modification of data, for ensuring the proper operation of cryptographic security and VBI related meter functions, for supporting multiple concurrent users and maintaining a separation of roles and operations performed by each user (*see column 8 lines 45-9 line 67*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's system wherein the cryptographic device includes a state machine for determining a state corresponding to availability of one or more commands in conjunction with the role, stateless, includes a computer executable code for preventing unauthorized modification of data, for ensuring the proper operation of cryptographic security and VBI related meter functions, for supporting multiple concurrent users and maintaining a separation of roles and operations performed by

Art Unit: 3621

each user because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system, which state to operate the system and which level of security is applicable.

9. As per claim 15, Whitehouse teaches a system wherein at least one of the users is an enterprise account (*see column 23 line 41-67*).
10. As per claim 17-18, Whitehouse teaches a system wherein the value bearing item is a mail piece comprises a digital signature (*fig 2*).
11. As per claim 19 and 20, Whitehouse teaches a system wherein the cryptographic device encrypts validation information according to a user request for printing a VBI, generates data sufficient to print a postal indicium in compliance with postal service regulation on the mail piece (*fig 2*).
12. As per claim 21 and 22, Whitehouse teaches a system wherein bar code is printed on the value bearing item that is a ticket (*fig 2*).
13. As per claim 23 and 24, Whitehouse teaches a system wherein each security device transaction data includes an ascending register value, a descending register value, a respective cryptographic device ID, an indicium key certificate serial number, a licensing ZIP code, a key token for an indicium signing key, user secrets, a key for encrypting user secrets, data and time of last transaction, last challenge received from a respective client subsystem, an operational state of the respective device, expiration dates for keys, and a passphrase repetition list, a private key, a public key, and a public key certificate, wherein the private key is used to sign device

status responses and a VBI which, in conjunction with a public key certificate, demonstrates that the device and the VBI are authentic (*see column 10 line 45-11 line 29, 20 line 16-40*).

14. As per claim 25, Whitehouse teaches a system further comprising at least one more cryptographic device remote from the plurality of user terminals coupled to the computer network, wherein the at least one more cryptographic device includes a computer executable code for authenticating any of the plurality of users (*see figs 4, and 7*).

15. As per claim 26, Whitehouse teaches a system wherein the cryptographic device shares a secret with the at least one more cryptographic device (*see column 8 lines 30-42, 9 lines 12-31, 10 lines 50-11 line 29, 12 lines 35-64*).

16. As per claim 27-29, Whitehouse teaches a system wherein one of the plurality of cryptographic devices is a master device and generates a master key set (MKS) includes a Master Encryption Key (MEK) used to encrypt keys when stored outside the device and a Master Authentication Key (MAK) used to compute a DES MAC for signing keys when stored outside of the device exported to other cryptographic devices by any cryptographic device (*see column 4 line 20-27, 16 lines 39-44, 23 lines 41-67*).

17. As per claim 30, Whitehouse teaches a method for securing data (*secure computer, 104, for securing data*) in a computer network (*network, 100, fig 3 and 4*) having a plurality of user terminals (*user, 102*), the method comprising storing (*memory for storing, 154*) information (*user data*) about a plurality of users using the plurality of terminals in a database remote from the plurality of securing the information about the users in the database by one or more of



cryptographic devices (*cryptographic keys*) remote from the plurality of user terminals, storing a plurality of security device transaction data (*transaction data*), wherein each transaction data is related to one of the plurality of users and wherein the cryptographic device is not dedicated to specific user terminals (*see fig 3, 4 and 7, column 8 line 30-9 line 63*). Whitehouse fails to teach verifying that a user is authorized to assume a role. However Leon teaches verifying that a user is authorized to assume a role (*see column 8 lines 45-67, 9 lines 20-27*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's verifying that a user is authorized to assume a role because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system and which level of security is applicable.

18. As per claim 31, Whitehouse teaches a method of loading a security device transaction data related to a user into one of the one or more of cryptographic devices when the user requests to operate on a value bearing item (*see column 9 line 32-63*).

19. As per claim 32-40, Whitehouse teaches the inventive concept as stated in claim 1. Whitehouse fails to teach a method of authenticating the identity of each user, verifying that the user is authorized to perform a corresponding operation based on the assumed role wherein the assumed role is a security officer role and the corresponding command is initiating a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to authorize increasing credit for a user account, a user role to perform expected IBIP meter

Art Unit: 3621

operation, a certificate authority role to allow a public key certificate to be loaded and verified. However Leon teaches a method of authenticating the identity of each user, verifying that the user is authorized to perform a corresponding operation based on the assumed role wherein the assumed role is a security officer role and the corresponding command is initiating a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to authorize increasing credit for a user account, a user role to perform expected IBIP meter operation, a certificate authority role to allow a public key certificate to be loaded and verified (*see column 8 lines 45-9 line 67*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's a method of authenticating the identity of each user, verifying that the user is authorized to perform a corresponding operation based on the assumed role wherein the assumed role is a security officer role and the corresponding command is initiating a key management function, a key custodian role to take possession of shares of keys, an administrator role to manage a user access control database, an auditor role to manage audit logs, a provider role to authorize increasing credit for a user account, a user role to perform expected IBIP meter operation, a certificate authority role to allow a public key certificate to be loaded and verified because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system, which state to operate the system and which level of security is applicable.

20. As per claim 41, Whitehouse teaches the inventive concept as stated in claim 1.

Whitehouse fails to teach a method of determining a state corresponding to availability of one or

Art Unit: 3621

more commands in conjunction with the roles. However, Leon teaches a method of determining a state corresponding to availability of one or more commands in conjunction with the roles (*see column 8 lines 45-62, 9 lines 35-67*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's a method of determining a state corresponding to availability of one or more commands in conjunction with the roles this would have provided knowledge to the system as to which entity is using the system in order to determine which level of security is applicable.

21. As per claim 43, Leon teaches a method wherein the state machine includes one or more of an uninitialized state, an initialized state, an operational state, an administrative state, an exporting shares state, an importing shares state, and an error state (*see column 9 lines 59-67*).

22. As per claim 44, Whitehouse teaches a method of storing data for creating an indicium, account maintenance, and revenue protection (*see figs 4 and 7*).

23. As per claim 45-47, Whitehouse teaches a method of printing a mail piece includes a digital signature, a postage amount, an ascending register of used postage and descending register of available postage (*see abstract, column 16 lines 25-38*).

24. As per claim 48, 49, Whitehouse teaches a method of printing a ticket, a coupon (*see fig 2*).

25. As per claim 50, Whitehouse teaches a method wherein the security device transaction data includes an ascending register value, a descending register value, a respective cryptographic device ID, an indicium key certificate serial number, a licensing ZIP code, a key token, an

Art Unit: 3621

indiciu signing key, user secrets, a key for encrypting user secrets, data and time of last transaction, last challenge received from a respective client subsystem, an operational state of the respective device, expiration dates for keys, and a passphrase repetition list (*see column 8 lines 30-42, 9 lines 12-31, 10 lines 50-11 line 29, 12 lines 35-64*).

26. As per claim 51, Whitehouse teaches a method of using a private key to sign device status responses and the VBI which, in conjunction with a public key certificate, demonstrates that the device and the VBI are authentic (*see column 9 line 32-63*).

27. As per claim 52, Whitehouse teaches a method of sharing a secret with any of the other devices (*see column 9 line 32-63*).

28. As per claim 53-56, Whitehouse teaches a method of generating a master key set (MKS), generating a Master Encryption Key (MEK) used to encrypt keys when stored outside the device, Master Authentication Key (MAK) used to compute a DES MAC for signing keys when stored outside of the device and performing one or more of Rivest, Shamir and Adleman (RSA) public key encryption, DES, Triple-DES, DSA signature, SHA-1, and Pseudo-random number generation algorithms by each of the cryptographic devices (*see column 4 line 20-27, 16 lines 39-44, 23 lines 41-67*).

29. As per claim 57, Whitehouse teaches a cryptographic device (*secure central computer, 102*) for securing data (*postal information*) on a computer network (*network 100, fig 3, 4*)

Art Unit: 3621

comprising a processor (*postal authority computer for processing, 180*) programmed to authenticate (*authenticate*) a plurality of users (*users, 104*) on the computer network (*network 100, fig 3, 4*) for secure processing of a value bearing item (*postal indicium, fig 2*) (*see abstract, figs 2, 3, 4*), a memory (*memory, 154*) for storing (*stores*) security device transaction data (*records*) for ensuring authenticity of a user, wherein the security device transaction data is related to the one of the plurality of users, a cryptographic engine (*cryptographic key*) for cryptographically protecting data and an interface (*interface, 152, 112, 252*) for communicating with the computer network and wherein the cryptographic device is not dedicated to specific user terminals (*see abstract, fig 4, 7, column 8 lines 54-8 line 63*). Whitehouse fails to teach a system wherein to determine that user is authorized to assume a role. However Leon teaches a system wherein to determine that user is authorized to assume a role (*see column 8 lines 45-67, 9 lines 20-27*). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's a system wherein to determine that user is authorized to assume a role because this would have provided knowledge to the system as to which entity is using the system in order to determine which key to load unto system and which level of security is applicable.

30. As per claim 58-62, Whitehouse teaches the inventive concept stated in claim 1. Whitehouse fails to teach a cryptographic device wherein the processor is programmed to verify that the identified user is authorized to assume a role of a key custodian role to take possession of shares of keys, an administrator role to manages a user access control database, a provider role to authorize increasing credit for a user account or a user role to perform

Art Unit: 3621

expected IBIP postal meter operations and perform a corresponding operation. However, Leon teaches a cryptographic device wherein the processor is programmed to verify that the identified user is authorized to assume a role of a key custodian role to take possession of shares of keys, an administrator role to manages a user access control database, a provider role to authorize increasing credit for a user account or a user role to perform expected IBIP postal meter operations and perform a corresponding operation (*see column 8 lines 45-9 line 67*).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Whitehouse's inventive concept to include Leon's a cryptographic device wherein the processor is programmed to verify that the identified user is authorized to assume a role of a key custodian role to take possession of shares of keys, an administrator role to manages a user access control database, a provider role to authorize increasing credit for a user account or a user role to perform expected IBIP postal meter operations and perform a corresponding operation because this would have provided knowledge to the system as to which entity is using the system in order to determine which level of security is applicable.

31. As per claim 63-65, Whitehouse teaches a cryptographic device further comprising a stored secret that is a password, a public/private key for cryptographically protecting data (*see column 8 lines 30-42, 9 lines 12-31, 10 lines 50-11 line 29, 12 lines 35-64*).

32. As per claim 66, Whitehouse teaches a cryptographic device wherein the value bearing item is a postage value including a postal indicium (*see abstract, column 16 lines 25-38*).

33. As per claim 67-68, Whitehouse teaches a cryptographic device wherein the value bearing item that include a bar code is a ticket (*fig 2*).

***Response to Arguments***

33. Applicant's arguments filed October 29<sup>th</sup>, 2003 have been fully considered but they are not persuasive.

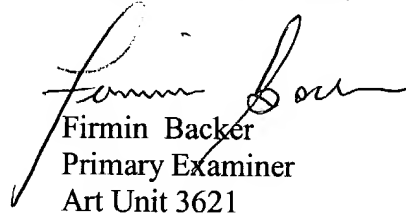
a. Applicants argues that the prior arts (Whitehouse and Leon) fail to teach among other thing a cryptographic device and wherein the cryptographic device is not dedicated to specific user terminals (*newly added limitation*). Examiner respectfully disagrees with applicant's characterization of the prior arts. Whitehouse as well as Leon teach among other things a system for electronic distribution of postage includes at least one secure central computer include cryptographic device for generating postal indicia in response to postage requests submitted by end user computers, and at least one postal authority computer system for processing the postal indicia on mail pieces. Applicant, in assessing Whitehouse's inventive concept fails to realize that Whitehouse system is a centralized system and centralized system is nondedicated system which is capable of servicing multiple users and not a particular user. Therefore, Examiners rejects the notion that the prior art fail to teach a cryptographic device and wherein the cryptographic device is not dedicated to specific user terminals.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Firmin Backer whose telephone number is (703) 305-0624. The examiner can normally be reached on Mon-Thu 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on (703) 305-9768. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Firmin Backer  
Primary Examiner  
Art Unit 3621

July 5, 2004